plate is about one-eighth of an inch thick, but diminishes in substance towards the margins.

In this interesting fossil we have evidence of the presence of another large Labyrinthodont in the Northumberland coal-field, which, judging from the measurements of the plate, cannot be less than the large species previously described. And if we look to the form of the plate and the character of the surface-ornament, it would seem probable that it belonged to a reptile not only specifically but likewise generically distinct from *Pteroplax cornuta*.

Two or three other different kinds of small sternal plates have likewise been found; but particular allusion will be made only to one species, which appears to be the best characterized. The others must be left for further elucidation.

Of this species there is a set of three plates lying in juxtaposition, apparently not very much disturbed; two are very nearly perfect, the third is partially destroyed. They are rounded and somewhat elongated, particularly one, which is probably a lateral plate; it is upwards of half an inch long.

In form and size these plates resemble those of *Keraterpeton*, and in structure they are almost identical. These specimens, as well as those figured of that genus by Prof. Huxley in the memoir before quoted, appear to have lost the external surface, and the bone-fibres beneath are exposed to view, radiating and anastomosing in a very regular manner from the centre of ossification, which is a little elevated. The appearance is very peculiar, and not a little resembles that of some specimens of *Synocladia* from the Magnesian Limestone. In the species before us the bony reticulation is not quite so fine as it is in *K. Galvani*.

[To be continued.]

XXXVI.—*Remarks on the Names applied to the British* Hemiptera Heteroptera. By J. W. Douglas and John Scott.

Under the above heading (*antè*, p. 94) Mr. Pascoe has very fairly criticised the nomenclature adopted in certain cases by hemipterologists, with a special reference to us; and we now claim to say a few words in reply.

The criticism falls chiefly under two heads:—

1. "The application of the generic names of the older authors to obscure, sometimes extra-European species, instead of to the larger number of better-known species which those authors must have had most prominently before them, thus rendering the use of new names necessary." As an example, is taken "the

old name *Cimex*, under which Linnæus was content to include all the Hemiptera Heteroptera known to him." Now this is not strictly the fact; for both in the 'Fauna Suecica' and in the 'Systema Naturæ' there are, besides *Cimex*, the genera *Notonecta* and *Nepa*, both of which latter names have been retained by all authors. With respect to *Cimex* the case is different. In the 'Systema,' where Linné first characterized his genera, the following characters are given for *Cimex*:—"*Rostrum* inflexum. *Antennæ* thorace longiores. *Alæ* 4, cruciato-complicatæ: superioribus antice coriaceis. *Dorsum* planum thorace marginato. *Pedes* cursorii." Yet immediately afterwards he puts the exceptional section "**a** Aptera," containing only one species. It is clear therefore that Linné never could have intended the apterous *lectularius* to be the type of his winged genus. Indeed, looking at the very heterogeneous nature of the species composing the genus as left by him, and the breadth of the characters laid down, it seems equally clear that he had no idea of a generic type, or that the first or other species on his list should be taken as representative. Fabricius must have seen this; and when he had to break up the Linnean genus, he very properly eliminated the exceptional *lectularius*. It is true he at first (in the 'Entom. System.') placed it under the title of *Acanthia* at the head of many unrelated species; but he afterwards (in the 'Syst. Rhyng.') restricted the genus to *lectularius* and another close ally. In the interval between the publication of these works, Latreille, having retained *Cimex* for *lectularius*, applied the Fabrician name *Acanthia* to other species; but Fabricius, coming after him, showed, in the 'Syst. Rhyng.,' that Latreille had not rightly interpreted his idea. Thus Mr. Pascoe's objection that "it is difficult to say why the Fabrician name *Acanthia* should have been preferred," is not tenable. The excision of Linné's first section under another name being valid, the question remained which of the other nine sections into which Linné had divided his genus was to be taken as representative; and, considering that each of them equally conformed to the characters laid down primarily, it is no wonder that no two subsequent authors, including those "most conversant with general entomology" (Fabricius, Burmeister, Germar, Kolenati, Zetterstedt &c.), agreed—showing also that there was no generally received rule by which their proceedings were to be regulated. If the principle apparently adopted for *Notonecta* and *Nepa*, of taking the first-mentioned species as the type, were esteemed binding, then it is curious that the first two of the section **b** are within Mr. Pascoe's inhibited line of "extra-European species,"

and that none of the species in the section have been taken by any author as exclusively representing the genus *Cimex* of Linné, although some of them are so common that they must have been among those that Linné "had most prominently before him."

But if, by common consent, it were agreed that the name *Cimex* was to be retained for certain species, could the genus so restricted and constituted (a mere fragment of the Linnean creation) be called, with any sense of truth, *Cimex* of Linné? A part is not equal to the whole: the play of Hamlet with the part of Hamlet left out "by particular desire" is not Shakespeare's work; neither is the genus *Cimex* of Latreille, Westwood, Blanchard, Gerstäcker, or Pascoe that of Linné; it only represents the *Cimex* of the particular author. If the name of Linné is still in any case to be appended to any portion of his mutilated genera, let it be clearly seen that the species included therein are really representative of his idea, or, if not, that the retention of the appellation is merely by courtesy, and in remembrance of the labours of the illustrious Swede, rather than a logical necessity. But the fact is that the genera of Linné represent the modern sections or families; and if the Linnean appellations were reserved and applied only to such divisions, the justice and propriety of the case would be met far more efficiently than by the use of the names of the original extensive genera for mere fragments of them—a proceeding which, in the very nature of things, must be more or less arbitrary, and subject to the caprice of any individual systematist. To this end it must come at last, whether the way be led by "authors conversant with general entomology" or by mere hemipterologists, which latter are said to be the only sinners against the Pascoean Canon No. 1.

As to this last allegation, let us see what has been done in two or three instances by coleopterists and lepidopterists where they had large genera to deal with. In Coleoptera the names *Curculio*, *Cerambyx*, *Chrysomela*, and *Leptura* have either been dropped or applied without any rule to common or uncommon, European or exotic species, and without regard to the position they held in the Linnean list. In Lepidoptera, to take a single instance, the name *Noctua* has either been omitted or employed to designate insects which, if common, are certainly inconspicuous, and have no claim to be taken as special representatives. Instances in other orders might be adduced to show that it is not only students of Hemiptera that have erred in "the application of the generic names of the older authors to obscure, sometimes extra-European species;" but these may suffice.

Passing to the remarks on the Fabrician genera, Mr. Dallas is well enough able to take his own part in explaining why, when revising the genus *Cydnus*, he retained the name for a single species; nor do we care to inquire why Fieber, Gerstäcker, and Bärensprung differ in their interpretation of the genus; for, as we see by the light of what has been done in other orders, there was no rule to guide them, and we believe that all are wrong in principle, as shown above.

As to *Tetyra*, Fab., it was Laporte, and not Fieber, who eliminated certain species of that genus under the name of *Eurygaster*; and it is therefore improper still to refer them to *Tetyra* by the authors quoted. From *Asopus*, Burm., Amyot and Serville selected *A. cærulea* (which can only be considered at most a type of part of Burmeister's genus) as the type of a new genus (*Zicrona*); and the European species of *Asopus*, except *luridus*, having been referred by different authors to other genera, *luridus* was the only one left for Fieber to take as the representative of the genus; but it would have been better if, as Mr. Pascoe says, he had employed Herrich-Schäffer's name *Podisus*, as he has indicated in the 'Schlüssel.'

2. "Giving new names to such genera as were formed by the union of two or more genera of a preceding writer."

The argument of this objection is met by anticipation in the foregoing remarks; for it cannot be said with any truth that the name of a thing should be retained for another thing which is differently constituted, but of which the former may be an ingredient. A chemist when he combines two or more elements does not give the name of any one of them to the resulting compound; neither can it be rightly done in the labours of the naturalist. We heartily wish it could.

Whether or not the names we have given to the combinations of the genera mentioned will stand is a very small matter, if the union of species proposed be received as good. Nor are we anxious on this latter point, as we do not attach an exaggerated importance to genera as now understood, regarding them rather as useful for classification than absolutely natural divisions*. *Microsynamma*, Fieb. (MS.), was discarded for *Neocoris* because it was not intended for more than one species, and the characters drawn for it would not include *Plagiognathus Bohemani*, which is now by us associated with *N. Scotti*.

* Flor's trinomial nomenclature, which Mr. Pascoe thinks is "rather difficult to explain," is easy to understand, as the first generic name is used in a collective or "family" sense, and the second as subgeneric. But the device is cumbrous, and especially inconvenient for quotation; the purpose intended would have been better served by a reference of the genera (or subgenera) to families (or subfamilies).

Microphysa, Westw., was rejected because the characters laid down were drawn only from the female of one species, differing greatly from the male, while those of *Zygonotus*, Fieb., included both male and female.

The remarks about *Hydrometra* and *Gerris* appear to be well founded, the majority of authors having overlooked the fact of the priority of Latreille's generic name *Hydrometra* for the species *stagnorum*. Even Burmeister has done so; for in a note under *Limnobates*, a genus he established for this species, he says:—"Die Aenderung des Gattungsnamens wurde dadurch nöthig, dass ich den Namen *Gerris* für die von Fabricius in diese Gattung gestellten Arten beibehalten zu müssen glaubte, da er das Recht der Anziennität für sich hat." *Hydrometra*, Lat., should be the generic name for *stagnorum*, and *Gerris*, Fab., be restored to the species of *Hydrometra* of authors.

In these remarks we have been careful not to travel beyond the record. The argument touches only a few points on the surface of a great subject (the real signification of genera), about which no two authors are agreed. The so-called "analytic method," for instance, so much in favour, tends to the infinite multiplication of genera; so that we are in danger of realizing the taunt of Curtis "that every species would constitute a genus," or of going a step further, and, by adopting Amyot's "système mononymique," which gives to every creature a new and single name, abolish genera altogether.

XXXVII.—*On the Muscular Anatomy of the Alligator.* By the Rev. Samuel Haughton, M.D., F.R.S., Fellow of Trinity College, Dublin.

[Plate X.]

In the sixteenth volume of the 'Annals of Natural History' (3rd series, p. 326) I published an account of the muscular anatomy of the leg of the Egyptian Crocodile (1865). Since that time I have had an opportunity of studying the anatomy of the Alligator of the Mississippi (June 1866). The specimen dissected by me was a female, upwards of 6½ feet in length. Its examination confirms, in most respects, the conclusions at which I arrived from the dissection of the smaller specimen of Crocodile previously described; and I believe the results of my dissection are worthy of being recorded.

Mr. Hair, of Edinburgh, has kindly forwarded me a copy of a paper on the Alligator, read by him as a thesis in the Uni-